

REMARKS

Claims 1-14, 27, and 28 are pending in the present application. Claims 15-26 and 29-39 have been cancelled without prejudice or disclaimer to the subject matter contained therein. The Applicant reserves the right to file a divisional application directed to the subject matter of cancelled claims 15-26 and 29-39.

A. Rejection of Claims 1-3, and 5 under 35 U.S.C. §102(b)

Claims 1-3, and 5 have been rejected under 35 U.S.C. §102(b) as being anticipated by Griffith et al. (US Published Application 2002-0039050). This rejection is respectfully traversed in view of the above amendments to the claims.

As respectfully submitted above, original independent claim 1 is directed a phase-locked loop bandwidth calibration circuit, comprising a programmable charge pump; a phase-locked loop filter operatively connected to the programmable charge pump; an oscillator, operatively connected to the phase-locked loop filter, to generate a frequency signal based upon a signal received from the phase-locked loop filter; and a control loop operatively connected to the phase-locked loop filter and the programmable charge pump. The control loop, as set forth by original independent claim 1, includes a gain measurement circuit, operatively connected to the oscillator, to measure a gain of the oscillator and controls the programmable charge pump to adjust its output current level based on the measured gain of the oscillator.

In formulating the rejection of claim 1, the Examiner alleges that Griffith et al. teaches a programmable charge pump; a phase-locked loop filter operatively connected to the programmable charge pump; an oscillator, operatively connected to the phase-locked loop filter, to generate a frequency signal based upon a signal received from the phase-locked loop filter; and a control loop operatively connected to the phase-locked loop filter and the programmable charge pump. Moreover, the Examiner alleges that Griffith et al. teaches, at paragraph [0024] that the control loop controls the programmable charge pump to adjust its output current level based on a measured gain of the oscillator. These positions by the Examiner are respectfully traversed.

Griffith et al. teaches, at paragraph [0024]:

Within the gain control processor 58, a magnitude of the amplified feedback signal may be measured and used to select an appropriate current gain for charge pumping within the charge pump 50. The amplified feedback signal may first be converted into a digital feedback signal within an analog to digital (A/D) converter 64. The digital feedback signal may then be used as an index to enter a lookup table 13 within the gain control processor 58 for recovery of an appropriate gain control word. With the appropriate gain control word, charge pumping may be controlled to a level appropriate to the operating point of the VCO 44. [Emphasis added.]

As taught by Griffith et al., the magnitude of the voltage-controlled oscillator's control voltage is measured and used to adjust the charge pump's level (gain). In contrast, the presently claimed invention specifically recites that the charge pump's level is adjusted based upon the measured gain of the voltage-controlled oscillator.

To make a measurement of the voltage-controlled oscillator's gain, a time-differential measurement of the voltage-controlled oscillator's control voltage is required. More specifically, to measure the voltage-controlled oscillator's gain, as claimed, the voltage-controlled oscillator's control voltage is measured at different times to determine a change (gain), thereby creating a time-differential measurement.

On the other hand, Griffith et al. specifically, teaches a single measurement of the magnitude of the voltage-controlled oscillator's control voltage wherein the single measurement, not a time-differential measurement, is used to address a lookup table so as to determine the correct charge pump level setting. Griffith et al. fails to teach or anticipate the measuring of the voltage-controlled oscillator's gain, which is a time-differential measurement.

The Examiner argues that measuring a voltage magnitude is a difference measurement. This statement by the Examiner is technologically imprecise. More specifically, to measure a voltage, the difference of two potentials at two points is determined. On the other hand, a voltage difference is the determination of the difference between two voltages, not the difference between two potentials. Moreover, gain is a measurement of the difference between two voltages measured at the same point but at different times. Thus, the Examiner has mischaracterized the accepted definition of voltage and the actual teachings of Griffith et al.

Therefore, Griffith et al. fails to anticipate the presently claimed invention as set forth by amended independent claim 1.

Accordingly, in view of the above submitted amendments and remarks, the Examiner is respectfully requested to reconsider and withdraw this rejection under 35 U.S.C. §102(b).

B. Rejection of Claims 7 and 8 under 35 U.S.C. §103

Claims 7 and 8 have been rejected under 35 U.S.C. §103 as being unpatentable over Griffith et al. (US Published Application 2002-0039050) in view of Eriksson (US-A-5,986,512). This rejection is respectfully traversed.

With respect to dependent claims 7 and 8, these claims depend from allowable independent claim 1. The Applicant reserves the right to present arguments at a later date to support the patentability of dependent claims 7 and 8.

Accordingly, in view of the above remarks, the Examiner is respectfully requested to reconsider and withdraw this rejection under 35 U.S.C. §103.

C. Rejection of Claim 12 under 35 U.S.C. §103

Claim 12 has been rejected 35 U.S.C. §103 as being unpatentable over Griffith et al. (US Published Application 2002-0039050) in view of Kirkpatrick (US-A-6,476,681). This rejection is respectfully traversed.

With respect to dependent claim 12, this claim depends from allowable independent claim 1. The Applicant reserves the right to present arguments at a later date to support the patentability of dependent claim 12.

Accordingly, in view of the above remarks, the Examiner is respectfully requested to reconsider and withdraw this rejection under 35 U.S.C. §103.

D. Rejection of Claims 13 and 14 under 35 U.S.C. §103

Claims 13 and 14 have been rejected under 35 U.S.C. §103 as being unpatentable over Griffith et al. (US Published Application 2002-0039050) in view of Lo et al. (US Published Application 2002-0075091). This rejection is respectfully traversed.

With respect to dependent claims 13 and 14, these claims depend from allowable independent claim 1. The Applicant reserves the right to present arguments at a later date to support the patentability of dependent claims 13 and 14.

Accordingly, in view of the above remarks, the Examiner is respectfully requested to reconsider and withdraw this rejection under 35 U.S.C. §103.

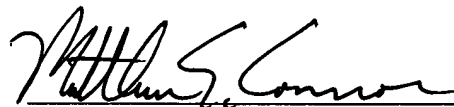
ENTRY of AMENDMENTS under 37 C.F.R. 1.116

The Applicant respectfully requests the Examiner enter the above amendments under 37 C.F.R. 1.116 for the following reasons. As clearly shown above, the amendments are consistent with the arguments previously submitted by the Applicant. Moreover, the amendments place the claims in condition for allowance without raising any new issues of materiality because the amendments are consistent with the arguments previously submitted by the Applicant, and thus, the Examiner has already considered the scope of such limitations. Furthermore, the amendments clearly reduce the outstanding issues in the present application and place the application in better condition for appeal. Thus, entry of these amendments under 37 C.F.R. 1.116 is proper and respectfully requested.

Conclusion

Accordingly, in view of the amendments and the reasons set forth above, the Examiner is respectfully requested to reconsider and withdraw the present rejections. Also, an early indication of allowability is earnestly solicited.

Respectfully submitted,



Matthew E. Connors
Registration No. 33,298
Gauthier & Connors LLP
225 Franklin Street, Suite 2300
Boston, Massachusetts 02110
Telephone: (617) 426-9180
Extension 112

MEC/MJN/mjn